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ABSTRACT

A technical note based on the Indonesian Nonformal Education Project discusses use of Q-sort, originally a research technique for studying small groups or individuals, as a needs assessment method. The background of Q-sort, designed to take subjective factors into account, is covered, and its use in needs assessment described: cards, each of which shows a single idea or problem, are ranked from 1 to 11 (or less) and sorted into piles according to perceived importance, after which the distribution of cards is recorded on a score sheet. Use of Q-sort for evaluation in the Indonesian project is discussed, including objectives in using Q-sort: providing interaction between provincial staff and central Project staff, obtaining a list of needs and problems, giving staff practice in scoring techniques, exposing staff to a participatory training model, and using ranked information from each Q-sort as the foundation for in-depth interviews. Implementation of Q-sort is detailed; major stages are: preliminary interviews to collect statements to be written on the Q-sort cards, actual Q-sorting, and in-depth follow-up interviews based on responses gained from the sorting procedures. A list of problem statements, an individual score sheet, and a consolidated score sheet are included. Advantages and disadvantages of Q-sort for needs assessment are summarized. (MH)

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The Indonesia Nonformal Education Project is part of a large-scale development effort of PENMAS, the Directorate of Community Education of the Ministry of Education and Culture in Indonesia. The project was financed jointly by the Government of Indonesia and by a loan from the World Bank.

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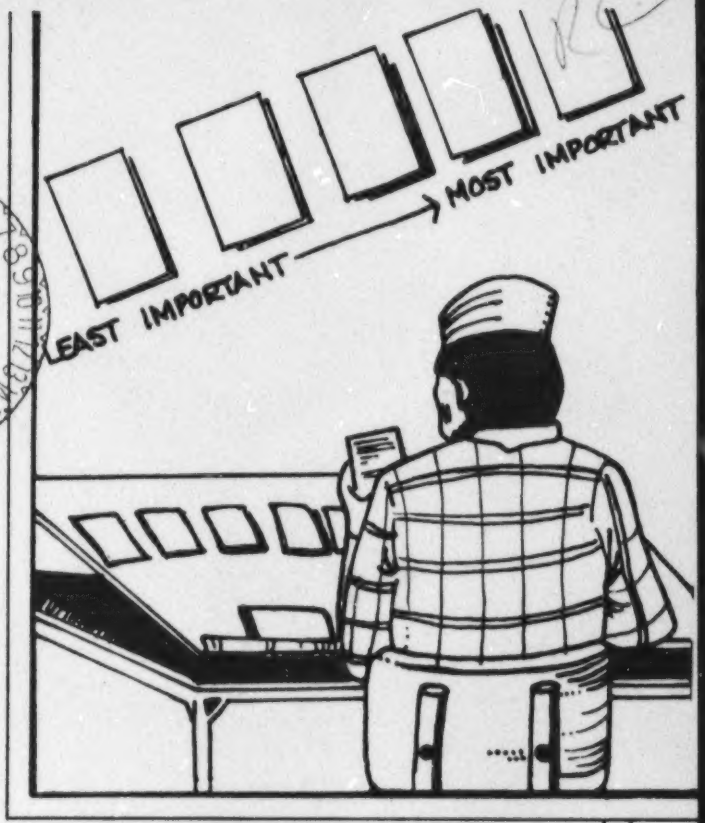

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Q-SORT AS A NEEDS ASSESSMENT TECHNIQUE

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NOTE WRITTEN BY: SEAN TATE

SUMMARY: This note describes how a research technique called the Q-sort was adapted for use as a tool for needs assessment in nonformal education. It gives step-by-step instructions on its application and enumerates its advantages and disadvantages.

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TECHNICAL NOTES

This note is part of a series of Technical Notes based on the experience of staff members working with PENMAS, The Directorate of Community Education of the Ministry of Education and Culture in Indonesia, and with the Center for International Education at the University of Massachusetts. The two organizations have been working together on a project financed by the Government of Indonesia with the assistance of the World Bank.

Each note focuses on a particular learning material, training technique, or issue which grew out of the experience of developing a large-scale, national, nonformal education program in Indonesia. The notes contain whatever information was available at the time of writing. They present a summary of experience in the hopes that it will be of value to others struggling with similar problems in different settings. The notes represent work in progress and are not intended in any way to be evaluations, although care is taken to present whatever evaluation information is available on the effectiveness of the particular method being discussed. They are intended to be self-contained so that practitioners can immediately adapt them for use in their own settings.

As in all such projects, many people contribute directly and indirectly to the development of methods. The notes attempt to accurately credit those most directly involved, but invariably there are contributors who go unrecognized, particularly in a project which encourages participation at all levels. Throughout the five-year period of collaboration, there has been a pattern of extensive binational effort.

We encourage readers to share with us their reactions and particularly relevant, similar experiences which they may have had in other settings. The notes are available in English from the Center for International Education and will also be available in Bahasa Indonesia from PENMAS. Notes will be issued periodically as experience produces approaches which we feel would be of interest to other practitioners.

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Q-SORT AS A NEEDS ASSESSMENT TECHNIQUE*

Introduction

What follows is a description of a needs assessment process adapted for use in nonformal education from the "Q" research methodology.[1] Q-sort, a data-gathering device central to the methodology, requires a person to "sort" a set of cards, each of which has a single idea or problem written on it. The person sorts the cards into 7-11 piles, arrayed in terms of perceived importance of the items on the cards. The result of this sorting process is a visual distribution in which there are one or two "most important" items, one or two "least important" items, and clusters of items of varying intermediate importance. This "tangible scale" is then recorded by the researcher on a chart through a simple scoring process.

In the adaptation of Q-methodology to nonformal education, the actual sorting process is preceded and followed by interviews with the individuals doing the sort. In the initial interview, the objective is to obtain statements to be written on the cards that will be sorted. These statements are supplemented by those of other interviewees involved in the same task or program and by perceptions of administrators. The interviews which follow the sort are aimed at procuring more in-depth information and are based on the results of the Q-sort itself.

A Q-sort was used in the Nonformal Education Project in Indonesia as a means of determining the problems and needs of the five-member evaluation teams in the seven provincial offices of PENMAS (the community education section of the Ministry of Education). The results of the Q-sorts and interviews were used as the basis for a training program in evaluation and for identification of structural and administrative problems blocking implementation of evaluation in the project.

Q-sort as a needs assessment technique is a useful adjunct to the normal interviewing process. It allows physical handling of "items" or "problems." Important in the Indonesian context, Q-sort side-stepped the tendency of people in other ranking exercises to avoid making definite choices or problem statements. The Q-sort process, as used in the Nonformal Education Project, was also a teaching tool in evaluation. The evaluation staff were

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*The author wishes to thank U. Sihombing, staff member of the national PENMAS office, who accompanied the author to the provincial offices. Without his assistance, this Technical Note could not have been possible.

not only assessed but were exposed to a new method of data-gathering. They had the opportunity to use elementary statistics while learning tabulation procedures of Q-sort.

Q-Sort Background

Although Q-sort is described here as a method for needs assessment, its original purpose was strictly as a research technique. The peculiar title of the technique, with the letter "Q," differentiates it from other methods. The foundation of Q-methodology rests upon views concerning the importance of subjectivity in scientific studies of human behavior. The word "subjective" has a dual meaning: either inner experience or the opposite of scientifically objective. Q-methodology argues that what is subjective (such as thinking) and what is observable (such as playing tennis) should not be differentiated for scientific purposes.

Traditional researchers used the R-technique of factorial analysis, that is, the correlation of tests. In the R-technique a number of tests are applied to a sample of persons, and the tests are scored objectively. The focus in this type of factorial analysis is on individual differences, and the analysis begins with individual differences observed. The correlational ideas of this approach are appropriate for large populations but are ineffective for studying small groups or individuals. Q-methodology with its Q-sort technique is a methodology for the "single case."

Q-sort Technique

The Q-sort technique is a variation on the ranking method. The person presented with the Q-sort task is asked to sort a set of cards each of which contains a statement. The person/judge is required, at least in a strict research context, to sort at least 100 cards. First, the person selects two cards which are believed to be most true and places them in a pile at one end of a prearranged array or spectrum of 11 piles. The array would look like this:

pile 1	pile 2	pile 3	pile 4	pile 5	pile 6	pile 7	pile 8	pile 9	pile 10	pile 11
2	4	8	12	14	20	14	12	8	4	2
Least true			number of cards per pile							Most true

Next, the sorter selects two cards that are felt to be least true. The next step is to select four of the unsorted cards that are felt to be next least true and place them in pile 2. The sort continues, selecting the number of cards per pile indicated above, until all cards are sorted. This alternating "most/least" procedure is only one of several ways in which the cards can be sorted. Whatever the sorting procedure, however, the end product is a distribution which can be conveniently scored.

Many analysts find Q-methodology too subjective. As a self-rating inventory, the criticism most often voiced is that with Q-sort each person's scores are distributed around one's own average and therefore meaningful only when interpreted in terms of one's own performance on previous Q-sorts. Other problems with Q-sort will be described in connection with its use as an evaluative/needs assessment tool in nonformal education.

Context for Q-sort: The Indonesian Setting

The Indonesian Nonformal Education Project was designed to take place in seven provinces. When in full operation, nearly a million people annually would receive education from the Project. In order to cope administratively with a project of such size, PENMAS divided its provincial offices into five components one of which was concerned with evaluation.

The evaluation component in each provincial office was known as a SPEM unit. SPEM is the acronym for Supervisi, Pelaporan (Reporting), Evaluasi, and Monitoring. The SPEM structure had been outlined in the project proposal and had been staffed by personnel taken from the other operating units in the provincial offices. Unfortunately, there were no job descriptions, and SPEM staff had little or no knowledge of evaluation.

During the first seven-month period, only intermittent attention had been paid to evaluation as PENMAS staff and other consultants coped with start-up problems of the large-scale enterprise. Although PENMAS attempted to obtain evaluation information in all seven provinces, SPEM staff did not appear to possess the capabilities to collect the required information. One place to start was to find out the needs and problems of the SPEM staff. What did they know or not know? What problems had already occurred in relation to their job? What did they think would be most helpful to learn?

There were several objectives in using Q-sort procedures in the situation just described. First, it was innovative, and it provided an interesting way to legitimize valuable interaction with the SPEM staff in each of the seven provinces. Second, it would provide a list of needs and problems from which to devise future evaluation strategy and from which an evaluation training program might be formulated. An advantage of the procedure was that it could provide an easily understood, quantifiable ranking that would attract serious attention from PENMAS management. Third, the SPEM staff could perform a Q-sort for evaluative purposes. In addition, they could practice simple scoring techniques as an introduction to quantitative analysis. Fourth, there was the indirect objective of exposing SPEM staff to a participatory training model while presenting Q-sort. Participatory attitudes were particularly important for this nonformal education project. The fifth objective for using Q-sort in this context was to use the ranked information from each sort as the foundation for in-depth interviews with each respondent. This objective carries the Q-sort process one step further than mere ranking. In-depth interviews enable the person assessing needs to ask respondents follow-up questions about the rankings to probe for further information.

Q-sort Implementation

The objectives just described were outlined and submitted to PENMAS management. After approval, the plan was implemented in the seven provinces. Three major stages were established for using Q-sort as a needs assessment tool in each of the provinces:

1. Preliminary interviews: Collecting statements to be written on Q-sort cards.
2. Q-sort: Actual sorting of index cards with problem statements on each.
3. In-depth follow-up interviews: Gathering information based on responses in sorting procedures.

These three stages provide a good framework for describing the Q-sort implementation in Indonesia. The following is a step-by-step description of the implementation of Q-sort as a needs assessment technique in one province.

Before a member of PENMAS' central staff and I began the needs assessment, we met with the director of the provincial office to outline the Q-sort process and objectives. This began what would become a recurring sales pitch on evaluation: the need for a new evaluation which emphasized providing simple basic information for decision making and program improvement. The director was responsive, especially because SPEM had the most problems. SPEM's principal problem, according to the director, was that it had been able to accomplish little since its inception.

A second preliminary meeting was held with the head of the SPEM unit, who was aware of the criticisms of SPEM. He discussed dissatisfaction among SPEM staff over pay, which was lower than that in other work units in the provincial office. Generally, he appeared anxious to better his own image and that of the SPEM unit.

A third preparatory meeting was held with all five members of the SPEM unit. There the working atmosphere of the unit revealed itself. Besides the leader, the other members comprised a middle-aged woman, a younger woman, and two men, one in his forties, the other older. All had been transferred from other jobs and only two had knowledge of evaluation beyond making inspections. After getting acquainted with the five staff members, we launched into a careful presentation of Q-sort, explaining why we were trying it and what would be done with the information produced by it. We emphasized that all responses would be anonymous.

To start the process, we distributed a brief questionnaire which contained one question written in the national language, Bahasa Indonesia:

> What action steps could be taken by the SPEM staff in the next three months to improve the coordination between SPEM and the other work groups in the provincial office?

This question, to which the staff individually gave written replies within 10 minutes, was meant to be a catalyst. The purpose was to get staff thinking about dealing with a problem that was already known. From experience we knew that unless we emphasized "action steps" and "what the staff could do," the responses to this question were usually couched in terms of what <u>others</u> could do <u>for</u> SPEM staff. Reticence about taking initiative could be

a result of the present working situation or associated with the unwillingness of subordinates to act without specific instructions from their superiors. Responses from the staff included the following:

1. Identify problems of the provincial office, particularly other work groups that need help.
2. Make a schedule of activities for internal staff of SPEM and arrange activities that would occur between the head of SPEM and leaders of other work groups.
3. Arrange meetings with other major work groups or sections in the provincial office in order to learn the problems of the groups.
4. Develop designs for SPEM's work. Have meetings with other work groups to explain the functions of SPEM.
5. Remind other groups in the provincial office that there will be a midterm project evaluation.
6. Develop job descriptions for SPEM members.

The principle purpose in asking this question was not only to get everyone thinking in a positive way, but also to provide a lead-in and source of information for interviewers in the first of the three stages of the needs assessment: the preliminary interview.

The preliminary interview was conducted on an individual basis with each of the SPEM staff. Its purpose was to collect problem statements that could be included on Q-sort cards. Each interview took 15 minutes and was conducted one after the other. Persons completing the interviews were asked not to talk to other staff members. Both I and the central PENMAS officer met with each staff member, alternately asking questions. We tried to keep the atmosphere friendly, interesting, and sincere.

Questions asked in the preliminary interview began with general queries about each person's background, previous positions, present position and what the person thought SPEM was supposed to be doing. Later questions became open-ended and more relevant for our purposes. Some of the questions asked were:

1. Could you please describe what your specific job is on the SPEM staff?
2. What kinds of activities have you personally been doing in SPEM recently? Describe the major activities in SPEM you have done in the past week.
3. How often does SPEM meet as a group?

4. How do you feel about your work in SPEM? Why?
5. How do you think other people (in other work groups of the provincial office) feel about SPEM?
6. How would you change SPEM to make it more effective?
7. What do you think you need to know in order to do your job better? What training would be useful?

Reactions to the preliminary interviews by the interviewees varied. The most articulate in this SPEM group was the older woman, who had ideas for getting things moving again. The younger woman had no definite ideas on SPEM or evaluation. The others expressed dismay at having been transferred from other positions to SPEM. SPEM was perceived as the "group of last resort" in terms of status and pay.

After completing the preliminary interviews, the two of us listed the problem areas cited by the SPEM staff. These problem statements would be written on index cards to be sorted in the next stage of the needs assessment. We came up with 25 problem statements, 17 of which were identified by the SPEM staff, and the rest of which were offered by PENMAS officials who had visited the office. The list as suggested by the SPEM group and including our additions, appears in Table 1.

Compiling this list and writing each item as a sentence on a separate index card (in Bahasa Indonesia) required only about half an hour. This included assigning an identifying number to each statement and writing that number on the back of each card. Because all of the previous activities used up most of the morning, we decided to continue the needs assessment process that afternoon.

Earlier experiences with Q-sort at other provincial offices taught us that the next two stages--the actual sorting of the index cards and the in-depth interviews--could be combined in one session with each person. The combined second and third stages lessened the amount of time needed for the needs assessment and cut down on opportunities for the SPEM staff to talk among themselves about the process and results of the sort, thus affecting validity of the results.

The actual sorting process with each person took no more than 10-15 minutes. We worked in a moderately large seminar room where there were five or six long tables. At one of these tables we laid out seven large index cards, numbered one through seven. The person doing the sorting was

Table 1: SPEM Unit Problem List

PROBLEM LIST

The following problems were sorted by one of the provincial SPEM units in Indonesia. One problem appeared on each card.

1. Each work group in the provincial office conducts its own evaluations without any relationship to the SPEM unit.
2. Other work groups in the provincial office are afraid of the SPEM unit.
3. There is not a clear understanding of "SPEM."
4. There is too much data to be collected.
5. I do not understand the tasks of SPEM.
6. I rarely go to the field for discussions with district staff or with field workers.
7. There is not enough coordination among work groups in the provincial office.
8. There are no instruments with which to collect data.
9. I do not know what to evaluate.
10. There is not enough assistance from the national office.
11. Questionnaires are difficult to use.
12. I do not know the activities of other work groups.
13. There is not enough technical assistance from the national office.
14. There are not good relationships among SPEM staff.
15. There is not enough opportunity to do my job.
16. There are not enough meetings of the SPEM unit.
17. I do not know where to collect data.
18. I do not know how to present data.
19. I do not know how to monitor the activities of PENMAS.
20. I do not understand "monitoring."
21. I never have a chance to evaluate activities.
22. Data from field workers are late.
23. There is no budget for SPEM.
24. I do not have any experience with SPEM.
25. There is no opportunity to exchange ideas with SPEM members in other provinces.

asked to place what was thought to be the card containing the most important problem on number seven and the least important problem on number one. Remaining cards were placed three each on piles two and six, five each on piles three and five, and seven on pile four, according to their relative importance. Written instructions on large pieces of newsprint were taped to an adjacent wall so that the participant could refer to them as necessary. (See Appendix for instructions for implementation of Q-sort.)

The principal difficulty with the sorting arrangement was how to give step-by-step instructions to the staff member orally without appearing to "hover over" the person. Here the room was large enough so that we could sit at one end of the room and the SPEM staff member could sit at the Q-sort table at the other end of the room. After briefly reviewing the Q-sort instructions on the newsprint, we could give the instructions one at a time in a moderate tone of voice from our end of the room and still be able to monitor each step in the process. We had discovered in an earlier Q-sort effort that giving the sorting instructions all at once led to confusion despite our efforts at providing clear instructions. Breaking up the sorting process into steps ("First, choose the one card with the statement that seems most important to you") led to greater care in making choices by the SPEM staff member.

After sorting of all the cards was completed, we asked the staff member to leave the room but to return for the in-depth interview five minutes later. During this five-minute interval, we scored the sort. One of us read the identification numbers on the back of each problem statement, and the other recorded them appropriately on the score sheet. Score Sheet One (Table 2) illustrates the distribution of problem statement identification numbers from least important to most important for one interviewee. With score sheet and list of problem statements in hand, we then proceeded with the in-depth interview to explore why that staff member had selected the most important problems.

When all five staff members completed the Q-sort procedure and the data were recorded on Score Sheet One, scores were transferred to Score Sheet Two (Table 3). Here scores were assigned a relative value (1-7, depending on which pile the statement was placed) and consolidated in order

Table 2: Score Sheet One. The numbers of the problem cards were recorded according to how they were sorted by each person

SCORE SHEET ONE

Name or Person #	Pile 1	Pile 2	Pile 3	Pile 4	Pile 5	Pile 6	Pile 7
Person #1	8	9 20 14	19 18 17 16 5	15 24 25 12 6 4 11	13 7 2 21 10	23 22 3	1
Person #2							
Person #3							
Person #4							
Person #5							

Table 3: Score Sheet Two

Person name or number	CARD ITEM NUMBER																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	VALUES ASSIGNED BY EACH PARTICIPANT																									
Person #1	7	5	6	4	3	4	5	1	2	5	4	4	5	2	4	3	3	3	3	2	5	6	6	4	4	
Person #2	6	5	3	5	3	3	3	4	3	5	4	4	6	4	2	5	4	2	2	1	6	4	7	4	5	
Person #3	6	5	3	5	3	4	2	4	6	5	6	3	4	3	7	3	5	5	3	1	4	5	4	2	4	
Person #4	7	4	6	3	3	6	5	5	4	2	5	2	5	6	5	3	4	4	2	1	3	4	3	4	4	
Person #5	6	3	7	3	5	4	4	5	4	2	4	1	5	6	5	4	3	4	4	5	6	2	3	2	3	
Total Values/ Item	32	19	26	20	17	21	19	19	19	19	23	14	25	21	23	18	19	18	14	10	24	21	23	16	20	
Item Rank	I		II										III		IV						V					

to determine the problems perceived by the group as most important. The problem statements were then ranked in order of importance.

The SPEM staff in this provincial office perceived as their most important problem that "each work group in the provincial office conducts its own evaluations without any relationship to the SPEM unit." If the person being interviewed indeed chose this problem as "most important," we, as interviewers, would ask which work groups did their own evaluations and what kind of evaluation was being done. This led to details of specific evaluation efforts in which the SPEM staff had tried to participate, but were rebuffed. This accounted for feelings of frustration: frustration with the leadership, frustration about being a part of a work group constantly viewed with suspicion, and frustration over having no clear idea of who was to do what in evaluation. Using "relationship" as the key word, we discussed what could be done in order to establish the relationship with other work groups again.

Another problem that surfaced at this provincial office was that the staff had little idea of what "SPEM" meant. Each of the staff could give a monologue about what each of the letters of the acronym represented, but when one had to explain in detail the duties of the SPEM unit, long silences occurred. We explored the problem of "no clear understanding of SPEM' thoroughly and found that not only was there little understanding of the official system of SPEM, there was also little understanding of evaluation concepts and techniques. What became more and more apparent was that while a plan and an organization diagram had been prepared for SPEM, this staff did not understand what they were supposed to do. They needed something very basic: a job description.

The in-depth interviews, like the preliminary interviews, varied in length. One was only twenty minutes long. The others were an hour or more. The interviews were revealing, but the amount of time consumed at this provincial office was too great. Ways would have to be found to condense the amount of time for this component of the process.

The visit to this provincial office concluded in a group session with the five SPEM members. We taught the group the scoring process for Q-sort. They learned that values could be substituted for pile numbers increasing with perceived importance of problem statements. When values assigned by all members for each problem statement were added up, the total importance

value resulted for each statement. Problem statements could then be ranked accordingly. The most important problems of this particular group, as shown in Table 3, were:

1. Each work group in the provincial office conducts its own evaluations without any relationship to the SPEM unit.
3. There is not a clear understanding of SPEM.
13. There is not enough technical assistance from the national office.
15. There are not many opportunities to do my job.
21. We never have a chance to evaluate activities.

The simplicity and neatness of the scoring process pleased the staff. We pointed out that they could use Q-sort as an evaluative/interviewing device in their work, thus helping them solve some of the problems. We were pleased with the Q-sort technique for needs assessment in this instance. We were able to gather useful information for assessment purposes while the SPEM staff members were exposed to a new assessment technique and were able to practice simple statistical procedures in the scoring process.

Reflections on the Q-sort Experience

We learned from this Q-sort experience to find ways to cut down the amount of time spent on the activity. For example, instead of two people conducting the interviews together, we discovered that the same two people could conduct two separate interviews, cutting in half the time spent on the interviewing stages. Second, the sorting process itself could be accomplished more quickly by (a) two or more instructors administering the sort with separate sets of Q-sort cards, (b) one interviewer administering the sort to two or more participants in the same room or adjacent rooms, or (c) cutting down the number of cards (i.e., problems) to be sorted. There was nothing magical about having 25 problems under these circumstances. Although 100 cards was standard for researchers, the purpose of Q-sort described here permitted much flexibility.

Substantively we learned much from the Q-sort experience, too. First, we discovered that the SPEM staff were suffering from lack of direction in terms of job guidelines. The result of this finding was the preparation of a complete job description for each SPEM staff position by the national

PENMAS office. Second, there was a realization of the severity of the administrative and bureaucratic problems facing the SPEM staff. They were being paid less than other staff members in the provincial offices. More importantly, many SPEM staff members were still working under administrative guidelines and lines of power connected to the positions from which they had been transferred. Many of the staff members' work lives were therefore cluttered with conflicting allegiances and work requirements. Becoming aware of the severity of these problems through the Q-sort assessment in the provincial offices did not, however, produce immediate results. After two years the bureaucratic tangle had yet to be resolved. Third, the knowledge gathered in the Q-sort efforts led to preparation of mini-training in evaluation concepts, strategies and techniques for the provincial staffs.

Q-sort accomplished its objectives by legitimizing valuable interaction with the SPEM teams in the seven provinces. It was also an attractive technique to PENMAS management. The process did provide, as promised, a list of needs and problems from which could be devised future evaluation strategies, and it did so in quantifiable terms. While numbers can become overemphasized in many evaluation efforts, the ability to present simple numerical data connected to interview results worked well in an organizational environment where formulas and quantification are popular. SPEM staff also learned how to do a Q-sort.

The remaining objectives of Q-sort were also met. Participatory training techniques and attitudes were introduced and later reinforced through the mini-training in evaluation. Finally, the sorting process provided an excellent preparation for the in-depth interviews.

In conclusion, Q-sort combined with interviews met most of the objectives that had been stated at the outset of this needs assessment effort in Indonesia. Q-sort offers a tool for needs assessment and evaluation that is useful in addition to other strategies.

Advantages and Disadvantages of Q-sort for Needs Assessment

Several advantages and disadvantages of Q-sort in general have been mentioned in the review of theory as well as in the description of the implementation of Q-sort in the Indonesian setting. These and other

advantages and disadvantages of the technique, specifically for needs assessment, are summarized below:

Advantages

1. Q-sort allows for physical handling of items; i.e., it is a physical ranking. It is a more active process than a rating scale technique.
2. Q-sort requires the participant to think carefully about ranking choices since instructions are given one step at a time during the actual sorting process.
3. Perhaps more important than the ranking benefits of the process is that Q-sort can be used as a spring-board for intensive, focused interviews.
4. If properly used, Q-sort can provide useful, in-depth and detailed needs assessment information.
5. The simple scoring of Q-sort can provide an introduction to elementary statistics.

Disadvantages

1. When the sorting process is combined with interviews, Q-sort for needs assessment can be time consuming.
2. Q-sort is not a process that can be used for large numbers of people.
3. The problems/ideas/suggestions used on the Q-sort cards limit the choices of participants.
4. Choices made by participants are subject to facilitator bias.
5. Clusters into which Q-sort cards are distributed give a more gross indication of rating differences than do rating scales.

Concluding Observations

Even taking into account important disadvantages, the practitioner in nonformal education may find the Q-sort technique useful, especially when used in conjunction with other needs assessment and evaluation strategies. While it is quantitative, it focuses more carefully on the person than do other statistical methods. In combination with interviews, it can be reasonably "human" if done with care and establishment of trust. Such characteristics coincide with the overall philosophy of most nonformal education programs.

In this note, the sorting of problem statements has been emphasized because of the author's experience. The process may also be used as a

staff development technique, where the facilitator helps work groups to set their priorities and focus discussion. Q-sort may also be used to assess the needs of field workers or to identify the needs of learners. Sorting "words" is only one possibility for Q-sort as a needs assessment technique. Photographs, drawings, and household objects that express felt needs as well can be used, especially with groups which lack literacy skills. Q-sort is a way of structuring participation where group members can share their concerns, and it allows participants to express true feelings.

Notes:

[1] Stephenson, William. The Study of Behavior: Q-sort and Its Method. Chicago: University of Chicago Press, 1953.

APPENDIX: Q-SORT IMPLEMENTATION

To the Facilitator:

Introduction

Q-sort is a prioritizing technique where individuals, one at a time, are asked to rank 25 items (problems, solutions, ideas) into clusters. The technique requires the person to sort index cards each of which has a single idea written on it. The person reviews all 25 cards and places them into seven piles according to their importance. Individual scores are obtained and, if desired, are combined for a team rank. Items for Q-sort cards are obtained from interviews with persons who will do the Q-sort.

Materials Needed

1. 25 index cards or small pieces of ordinary paper. (If sorting process is to be implemented with more than one person at the same time, 25 cards are needed for each participant.)
2. Seven larger cards or sheets of standard-size paper.
3. Two sheets of graph paper for scoring.
4. Several broad-tipped magic marker pens.
5. Instructions To the Participants, written on several large pieces of newsprint.
6. One large sheet of blank newsprint.
7. One copy of instructions, To the Participant, for each person doing the sort.
8. Masking tape.

Preparation

1. Write instructions To the Participant on newsprint and post on wall.
2. Prepare copies of To the Participant (see this Appendix) to be distributed to each person doing the sort.
3. Conduct pre-sort interviews in order to obtain ideas, statements, or problems to be written on the Q-sort cards. Interview all participants before listing the items.
4. Write one item (problem, statement, solution) on each of the 25 index cards. Label each card on the reverse side with a different number from 1 to 25.
5. Number the large index cards (or paper) from 1 to 7 and place consecutively on a table. Label Card #1 "least important" and Card #7 "most important." These cards indicate piles into which

the smaller index cards are sorted. The array should look like this:

Procedure

1. Allow participants to read instructions on individual sheets. Ask for questions.
2. Review instructions with participants, referring to those written on newsprint. Ask for questions.
3. State that answers and scores will remain anonymous. Tell participants that the purpose of the exercise is not to criticize or evaluate; rather it is a way of finding out the most pressing problems or needs of the participants.
4. Have participants begin sorting. Do not "hover over" participants. Keep a distance that allows participants to relax and at the same time follow the step-by-step instructions given by the facilitator. Allow 10-20 minutes for this process.
5. Review instructions To the Participant one at a time as participants proceed through the exercise.

Scoring

1. On a sheet of graph paper draw a matrix similar to Score Sheet One.
2. Record the numbers of items of each participant in the column of the appropriate pile number, as sorted by the participant. Piles 1 and 7 should contain one item number each; piles 2 and 6, three item numbers; piles 3 and 5, five item numbers; and pile 4, seven item numbers.
3. If necessary, persons' names may appear on this score sheet, but numbers or letters may keep the scores anonymous.
4. On another sheet of graph paper draw a chart resembling Score Sheet Two.
5. Transfer value numbers (the same as pile number) of each item for each participant in the appropriate space on Score Sheet Two.

Relative importance of each item is determined by pile number. Thus pile number equals value number.

6. Total all value numbers for each item and record in the appropriate boxes.

7. Rank each item according to importance. Those with highest value numbers receive the highest ranking. Record appropriately.

Follow Up

1. Use ranking of problems, statements, or ideas as a guide during in-depth interviews.

To the Participant:

Read the following instructions for the Q-sort procedure. The facilitator will go over them again with you when you have finished. Ask if you have any questions.

1. You have been given 25 cards. On each a problem/statement/ suggestion/idea is written. Read all of these cards. Indicate when you have finished.
2. Choose one card with the item you feel is most important to you. Place this card on top of the large index card labelled "7."
3. You now have 24 cards. Choose one card with the item which seems least important to you. Put this card on top of the large index card labelled "1."
4. You now have 23 cards. From these, choose three which are the most important to you and place them on top of the large index card labelled "6."
5. You now have 20 cards. From these, select three cards which are the least important to you. Place them on top of the large index card labelled "2."
6. You now have 17 cards. From these, select five cards which you feel are most important to you. Place these on top of the index card labelled "5."
7. You now have 12 cards. From these, choose five cards which you think are least important to you. Place these cards on top of the index card labelled "3."
8. You now have 7 cards left. Place all of them on the index card labelled "4."

SCORE SHEET ONE

Name or Person #	Pile 1	Pile 2	Pile 3	Pile 4	Pile 5	Pile 6	Pile 7
Person #1							
Person #2							
Person #3							
Person #4							
Person #5							

SCORE SHEET TWO

Person name or number	CARD ITEM NUMBER																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	VALUES ASSIGNED BY EACH PARTICIPANT																									
Total Values/ Item																										
Item Rank																										

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